NOTES ON NEOTROPICAL COMPOSITAE, I

José Cuatrecasas

The following descriptions, nomenclatural transfers, synonymic concepts and other comments refer to the Astereae, especially to *Conyza*, and are extracted from my manuscripts for the Flora *of Colombia* in preparation. The genus *Conyza* is considered here as defined by Cronquist in Brittonia 7:629-632 1943. The work upon which this paper is based has been sponsored by the National Science Foundation.

Key to the Colombian species of Conyza:

1. Flores feminei capillari-tubulosi.
   2. Pappus duplex, exterior minutis pilis coronam formantibus. Plantae lanatae vel lanuginosae. Sec. *Laennecia.*
      3. Capitula angusta subturbinata 4-5 mm alta 8-9 mm diametentia (expansa), involucro 4 mm alto bracteis anguste lineari-lanceolatis pallide viridibus vel brevissime violaceis, floribus femineis 42-46. Achaenia dense villoso - hispidula. Pappus pilis exterioribus conformibus 0.8-1 mm longis. *C. filaginoides* (DC.) Hier.
      3. Capitula semiglobosa 5-6.5 mm alta 11-15 mm diametentia (expansa), involucro 4-5 mm altum bracteis late lanceolatis sursum purpuraceis, floribus femineis circa 100. Achaenia margine dense ciliata faciebus tantum ad medium parce hispidulis. Pappus pilis exterioribus minutissimis saepe dilatato-squamulosis 0.2-0.3 mm longis. *C. gnaphalioides* HBK.
   2. Pappus simplex, pilis uniseriatis. Plantae haud lanatae. Sec. *Conyza*
      4. Planta virgato-ramosa hirtula plus glandulosa, thyrsoideo-floribunda. Folia pinnatipartita 1-4 cm longa segmentis linearibus. Capitula parva subturbinata 3-4 mm alta 75-110 floribus femineis, corolla ☿ limbo imfundibuliformi. *C. sophiaefolia* HBK.
      4. Planta eglandulosa. Folia serrata crenata vel integra.
         5. Herba rosulata vel subrosulata subscapifera hispidula-hirsuta inflorescentia laxa paucicapitulata (3-12 capitulis). Folia repando dentato-crenata vel integra, basilaria 5-20 cm longa. Capitula 6-8 mm alta 15-18 mm lata (expansa) semigloboso-

campanulata circa 380 floribus femineis, corolla ☿ limbo stricte tubuloso. C. chilensis Spreng.

5. Herba annua stricta erecta parce hispidula. Folia serrata vel integra oblonga 1-6 cm longa. Panicula corymbosa mediocris vel brevis. Capitula minuta semigloboso-campanulata 2.5-3 mm alta circa 100 floribus femineis. Corolla ☿ limbo infundibuliformi. C. microcephala Hemsl.

1. Flores feminei minute ligulati. Sec. Coenotus.

6. Herba suffruticosa hirsuta foliis pinnatipartitis segmentis linearibus. Capitulum semiglobosum 5-5.5 mm altum 110-160 floribus femineis. Corolla ☿ tubo stricte tubuloso. Ovarium dilute adpresse villosum. C. cardaminifolia HBK.

6. Herba annua vel perennis foliis integris dentatis vel lobatis.

7. Herba plus minusve lanata pilis longis tenuibus flexuosis intricatis. Proles albo-lanatae. C. prolialba Cuatr.

7. Herba hispida hirsuta vel villosa.

8. Herba annua erecta stipitato-glandulosa et hirsuta. Capitula 6 mm alta 170-300 floribus femineis. C. trihecatactis (Blake) Cuatr.

8. Herba haud glandulosa.

9. Herba basi suffrutescens parce hispidula vel glabra raro hirsuta ramis simplicibus erectis extremo panicula modesta subcorymbosa congesta vel laxa. Involucrum 4.5-6 mm altum plerumque violaceum. Flores feminei 50-140 (excep. 244 in var. hirsuta). Capitula 5-7 mm alta 10-14 mm lata (expansa). C. uliginosa (Benth.) Cuatr.

9. Herba annua simplex.

10. Herba plerumque flexuosa vel erecta pilosa foliis inferioribus et mediis oblonge obovatis vel spathulatis. Inflorescentia laxe corymboso-paniculata. Involucrum circa 3.5 mm altum 200-240 floribus femineis. Capitula circa 4 mm alta 7-9 mm lata (expansa). Ovarium dilute adpresse villosum. C. apurensis HBK.

10. Herba erecta plerumque robusta foliis lanceolatis vel lineari-lanceolatis vel linearibus, sursum ramis fastigiatis thyrsoideo-floribunda.

11. Capitula 3-5 mm alta 7-8 mm diametro (expansa) 40-50 floribus femineis. Involucrum plerumque glabrum vel subglabrum bracteis viridi-pallidis linea media prominula glandulosa. Corolla ☿ limbo tubuloso. Ovarium glabrum vel subglabrum. C. canadensis L.

11. Capitula 5-7 mm alta, 10-15 mm diametro (expansa) 60-120 floribus femineis. Involucrum plerumque hirsutum vel villoso-hirsutum. Corolla ☿ limbo tubuloso-infundibuliformi. Ovarium sparse villosum. C. bonariensis (L.) Cronquist.

CONYZA PROLIALBA Cuatr., sp. nov.

Herba annua vel perennans radice fusiformi ramulosa; planta vernalis vel juvenilis parva pulvinata 2-5 cm alta basi ramosa, ramis numerosis congestis densissime foliosis, foliis dense crasseque indumento albo lanato vestitis apicibus ramulorum sterilium flocculoso-lanatis; adulta ad 60 cm alta caule simplex vel basi ramoso, caulibus ramisque erectis teretibus vel leviter striatis sparse glanduloso-pilosis et plus minusve lanuginosis pilis longissimis tenuibus flexuosis intricatis.

Folia membranacea pallide viridia copiosa; juvenilia in ramulis sterilibus lamina ovata vel elliptica lobata basi in longum petiolum planum nervatum subscariosum producta lobis 4-5 obtusiusculis circa 2 mm longis ascendentibus, untringue albo-lanata pilis stipitato-glandulosis brevibus et pilis longis lanuginosis dense tecta,5-12 mm longa 4-10 mm lata,petiolo 8-20 mm longo circa 1.5 mm lato basi ampliato subamplectenti. Folia caulina inferiora vel media sessilia oblonga extremo plus minusve ampliato margine grosse lobato-serratia dentibus oblongis longiusculis acutisculis vel obtusiusculis mucronulatis basim versus integra basi dilatata amplexicaulia rotundato-auriculata utrinque dilute glandulosa et pilis longis lanosis copiosis praedita; sursum folia gradatim magis integra basi ampliora ovata rotundato-amplexicaulia suprema integerrima acutiuscula vel obtusiuscula mucronulata; omnia margine plus minusve revoluto crispoque, nervo medio subtus prominenti, nervulis lateralibus parcis ascendentibus venulisque laxis obsoletis, 1.5-5 cm longa 0.5-1 cm lata. Capitula 1-5 breviter pedicellata vel subsessilia in axillis foliorum glomerata, glomerulis secundum ramorum saepe pseudospicas elongatas formantibus cujasque numerosas paniculam compositam pyramidatam saepe valde floribundam formantes; folia (bracteae) subtendentia viridia ovato-lanceolata auriculato-amplectentia integra margine recurvata costa subtus prominenti glomerulos excedentia vel aequilonga. Pedicelli teneri 0.5-4 mm longi tenuiter lanuginosi, bracteolis

subtendentibus linearibus 5-8 mm longis 1-1.5 mm latis.

Capitula circa 5 mm alta semigloboso-campanulata circa 6-7 mm lata (expansa 11-12 mm). Involucrum pallide viride vel purpurascens 4.5-5 mm altum, bracteis 3-seriatis lance-linearibus acuminatis dorso dilute stipitati-glandulosis et longe flexopilosis margine late scariosis eroso-ciliatisque, interioribus 4-4.5-5 mm longis 0.6-0.8 mm latis exterioribus 3.5 mm longis.

Flores radii feminei ligulati 200-260; corolla minute ligulata tubulo capillari 3-3.5 mm pappum aequilonga vel leviter excedenti sursum minute pilosulo apice leviter ampliato oblique truncato-aperto laminam amplectentem oblongo-ellipticam integram vel minutissime emarginatam 0.5 mm longam formanti. Rami styli stricti lineares circa 0.7-0.8 mm longi corollam excedentes.

Flores centrales hermaphroditi 10-20; corolla lutea circa 3.2-4 mm longa tubulo angusto sursum minute pilosulo circa 2.4-2.8 mm longo limbo campanulato dentibus oblongis acutiusculis 0.7-0.8 mm longis sparsissimis pilis longis tenuibus. Antherae circa 0.9 mm longae basi rotundatae apice anguste apiculatae. Rami styli robusti 0.7 mm longi oblongi apice sublanceolato extus dimidia superiore parte papilloso-hispiduli.

Ovaria elliptico-oblonga utrique rotundata complanata margine nervata glaberrima 1.1 mm longa. Pappus 3 mm longus albidus pilis tenuibus strigulosis uniseriatis, deciduis fragilibus. Receptaculum 2-2.5 mm diamitens alveolatum marginibus alveolorum dentatis.

Type: Colombia, Magdalena: Sierra Nevada de Santa Marta, valley descending southwestern from Picos Reina and Ojeda: rocky and meadowy paramos around Laguna Naboba, Laguna Mamo, 4200-4300 m alt. Adult leaves light green or lanuginous whitish; involucre light green or the tips more or less dark; young plants densely white-wooly. October 4, 1959, coll. J. Cuatrecasas & R. Romero Castañeda 24595 (Holotype, US; Isotype COL).

Other specimens examined: Sierra Nevada de Santa Marta, southeastern slopes: Hoya del Río Donachuí: Meollaca (or Meuyaca), rocky páramos about 3400 m alt. Leaves light green; involucre light green. October 8, 1959, coll. J. Cuatrecasas & R. Romero Castañeda 24627 (Paratype US). Sierra Nevada de Santa Marta, southeastern slopes: Hoya del Río Donachuí: Laguna de Calocribe (eastern of Meolloca), páramo 3600-3700 m alt. Leaves grayish whitish green; involucre very light green, becoming purplish, florets yellow. September 30, 1959, coll. J. Cuatrecasas & R. Romero Castañeda 24522 (US). Sierra de Perijá, eastern of Manaure: Quebrada de Floridablanca, Andean forest and bushes, 2700-2800 m alt. Pale green herb; Corollas white. November 12, 1959, coll. J. Cuatrecasas & R. Romero Castañeda 25260 (US).

Conyza prolialba is closely related to C. mima Blake from Venezuela, but differs by having always ligulate ray flowers and glabrous achenes, and by being a larger plant. From the

Central American Erigeron subspicatus Benth., the new species differs by its glabrous achenes and more abundant indument both representing probably only vicariant varieties of the same species; however, the Bentham epithet is already used for another species of Conyza.

CONYZA PROLIALBA var. SUBSPICATA (Benth.) Cuatr., comb. nov.
Erigeron subspicatus Benth. in Oerst. Kjoeb. Vidensk. Meddel. 82. 1852

CONYZA TRIHECATACTIS (Blake) Cuatr., comb. nov.
Erigeron trihecatactis Blake, Journ. Wash. Acad. Sci. 27: 380. 1937.

CONYZA ULIGINOSA (Benth.) Cuatr., comb. nov.
Erigeron uliginosus Benth., Pl. Hartw 204. 1845.
Erigeron popayanensis Hieron., Bot. Jahrb. Engl. 28:586. 1901.
Erigeron sulcatus var. columbianus Hieron., Bot. Jahrb. Engl. 28:586. 1901.
Erigeron uliginosus var. hirsutus Hieron., Bot. Jahrb. Engl. 28:587. 1901.
Erigeron bonariensis var. meridensis Cuatr., Trab. Mus. Nac. Cienc. Nat. Jard. Bot. Madrid, Ser. Bot. 33:132. 1936.

CONYZA ULIGINOSA var. COLUMBIANA (Hieron.) Cuatr., comb. nov.
Erigeron sulcatus var. columbianus Hieron., Bot. Jahrb. Engl. 28:586. 1901.
Folia caulina anguste linearia, 1-2 mm lata. Inflorescentiae plerumque laxiores pedicellis gracilioribus.

CONYZA ULIGINOSA var. HIRSUTA (Hieron.) Cuatr. comb. nov.
Erigeron uliginosus var. hirsutus Hieron., Bot. Jahrb. Engl. 28:587. 1901.
Caules folia inflorescentiaeque densiuscule longeque albido-hirsuti.

CONYZA BONARIENSIS var. LEIOTHECA (Blake) Cuatr., comb. nov.
Erigeron bonariensis var. leiothecus Blake Contr. Gray Herb. 52:28. 1917.
Conyza floribunda HBK, Nov. Gen. Sp. Pl. 4:73. 1820.

ERIGERON CHIONOPHILUS var. LEPTOPHYLLUS Cuatr., var. nov.
Herba caespitosa rhizomate verticale vel obliquo ramoso ramis erectis cum vaginis foliorum vetustorum tectis denique nudis apice folia rosulato-fasciculata congeste ferentibus.
Folia anguste lanceolato-linearia vel linearia apice acuta basim versus sine sensu longeque attenuata supra basim in vaginam ampliata 3-4 cm longa 1-2 mm lata, nervo medio tantum aliquando paulo conspicuo undique villoso-hirta pilis rigidis patulis vel subpatulis longis acutis basi incrassatis copiosis tecta.

Capitulum 1.5 cm diamitens campanulatum. Involucrum circa 1.3 cm altum bracteis herbaceis viridibus 4-seriatis subaequilongis lineari-subulatis acuminatis interioribus 11 mm longis ad basim 1-1.2 mm latis margine scariosis eroso-ciliatisque dorso villosis pilis longis subpatulis flexuosis, exterioribus 10 mm longis similibus. Flores radii feminei 3-4 seriati involucrum attingentes vel breviores, corolla ligulata alba circa 8 mm longa tubulo capillari 3 mm longi glabro vel subglabro lamina lineari apice minute 2-3 dentata vel integra 0.4 mm lata, ramis styli linearibus subobtusis subcompressis minute papillosis 0.8 mm longis, pappo 3.5-4 mm longo pallide stramineis pilis inaequilongis basi coalitis strigosis sub-biseriatis exterioribus vel subexterioribus minutis (0.1-0.3 mm longis) squamulosis, ovario oblongo sublaeve glabro vel praecipue sursum sparsis pilis 2 mm longo. Flores disci hermaphroditi circa 50, corolla 4.5-5 mm longa parce pilosa parte media tubulo 2-3 mm longo limbo tubuloso-campanulato dentibus 0.8-0.9 mm longis triangulari-oblongis acutiusculis, antheris 1.8 mm longis basi minute auriculatis ramis styli 0.8 mm longis oblongis subcompressis obtusiusculis extus sursum papilloso-pilosis deorsum gradatim minus papillosis margine papilloso-stigmatico, ovario 1 mm longo glabro vel parcissimis pilis, pappo cum in femineis.

Varietas a specie folia anguste linearia bracteae angustiores differt.

Type: Colombia: Santander: "cumbres montañosas a 2800 m alt., a 2 km del paraje Berlin; flores blancas; suelo seco, arcilloso". 18-XII-1948, Araque & Barkley 18S409 (Holotype, US).

ERIGERON WEDDELLIANUS Hieron. ex Sodiro, Bot. Jahrb. Engl. 19: 49. 1894; 29:21. 1900.

Erigeron spathulatum Wedd., Chl. And. 1:197. 1857. Not E. spathulatus Vahl. 1793.

Erigeron ecuadoriensis Hieron., Bot. Jahrb. Engl. 21:336. 1895.

Erigeron Weddellianus var. rosuloides Cuatr., An. Univ. Madrid, 4(2):218 (reprint pag. 15). 1935.

Erigeron Caldasii Cuatr., Trab. Mus. Cienc. Nat. Jard. Bot. Madrid, Ser. Bot. 29:23, fig. 6. 1935.

In 1894 Hieronymus described very briefly and imperfectly Erigeron Weddellianus, based on a specimen found among collections of Erigeron pellitus (= Oritrophium peruvianum) in the Paris herbarium. The same Hieronymus, in 1900 indicated the type (Jameson 273) of his species by identifying it with the well known Erigeron spathulatum Weddell (not Vahl).

ORITROPHIUM HIRTOPILOSUS (Hieron) Cuatr., comb. nov.

Erigeron hirtopilosus Hieron., Bot. Jahrb. Engl. 21:336. 1895.

Type: Stuebel 48 i. Photo F.M. 14844. Specimen examined: Mathews, 1862, "Peruvia" (US. 245951). This specimen agrees

perfectly with the description and photograph of type.

BACCHARIS INCARUM (Wedd.) Cuatr., stat. nov.

Baccharis microphylla β incarum Wedd. Chlor. And. 1:170. 1856.

The type (P) was collected by Weddell in the Cordillera de Tacora, Peru. Paratypes came from Potosi, La Paz, Lago Titicaca near Tioguanaco (collect. Weddell, Orbigny, Pentland). The Peruvian specimens: Macbride & Featherstone 474 from Matucana and Macbride & Featherstone 2502 from Pomopampa, distributed as B. intermedia DC. belong to B. incarum, which is very different from B. intermedia.

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NOTES ON NEW AND NOTEWORTHY PLANTS. XXXIV

Harold N. Moldenke

LANTANA MACROPODA f. ALBIFLORA Moldenke, f. nov.

Haec forma a forma typica speciei corollis albis recedit.

This form differs from the typical form of the species in having the corollas white with a yellowish eye.

The type of the form was collected by Cyrus Longworth Lundell (no. 14517) in the Yeager Pasture of the South Texas Syndicate Ranch, in the vicinity of Experimental Garden, La Salle County, Texas, on October 15, 1945, and is deposited in the Lundell Herbarium at the Texas Research Foundation, Renner, Texas.

LIPPIA INOPINATA Moldenke, sp. nov.

Frutex; ramulis gracilibus tetragonis subadpresso-villosis, pilis antrorsis griseis; foliis parvis subcoriaceis ovato-ellipticis saepe falcato-conduplicatis ad apicem basinque acutis, margine grosse serratis, dentis antrorsis, supra parce villosis bullato-lineatis, subtus densiuscule villosis; inflorescentiis axillaribus solitariis simplicibus.

Woody shrub; stems tall, woody, gray, glabrous, subterete; branchlets slender, brownish, obtusely tetragonal, villous with subappressed antrorse grayish hairs; principal internodes much abbreviated, 8--21 mm. long; leaves decussate-opposite; petioles very short, 2--5 mm. long, densely whitish-villous with long antrorse hairs; leaf-blades subcoriaceous, rather uniformly grayish-green on both surfaces, ovate-elliptic, often falcate-conduplicate, small, 2--3 cm. long, 1--1.5 cm. wide, acute at the base and apex, coarsely serrate along the margins with antrorse sharply acute teeth, rather sparsely villous and bullate-lineate above, more densely gray-villous beneath; midrib and secondaries deeply impressed above and sharply prominent beneath; veinlet reticula-